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JUL 16 1964

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS for IDAHO

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,
and

IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in cooperation with the Comptroller of Water Rights of British Columbia, and Federal, State and private organizations listed on the last page of this report.

AS OF
APR. 1, 1964

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES _____	MONTHLY (FEB.-MAY) _____	PORTLAND, OREGON _____	ALL COOPERATORS
BASIC DATA SUMMARY _____	OCTOBER 1 _____	PORTLAND, OREGON _____	ALL COOPERATORS
STATES			
ALASKA _____	MONTHLY (MAR.-MAY) _____	PALMER, ALASKA _____	ALASKA S.C.D.
ARIZONA _____	SEMI-MONTHLY _____ (JAN.15 - APR.1)	PHOENIX, ARIZONA _____	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO _____	MONTHLY (FEB.-MAY) _____	FORT COLLINS, COLORADO _____	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO _____	MONTHLY (JAN.-JUNE) _____	BOISE, IDAHO _____	IDAHO STATE RECLAMATION ENGINEER
MONTANA _____	MONTHLY (JAN.-JUNE) _____	BOZEMAN, MONTANA _____	MONT. AGR. EXP. STATION
NEVADA _____	MONTHLY (JAN.-MAY) _____	RENO, NEVADA _____	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON _____	MONTHLY (JAN.-JUNE) _____	PORTLAND, OREGON _____	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH _____	MONTHLY (JAN.-JUNE) _____	SALT LAKE CITY, UTAH _____	UTAH STATE ENGINEER
WASHINGTON _____	MONTHLY (FEB.-JUNE) _____	SPOKANE, WASHINGTON _____	WN. STATE DEPT. OF CONSERVATION
WYOMING _____	MONTHLY (FEB.-JUNE) _____	CASPER, WYOMING _____	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA _____	MONTHLY (FEB.-JUNE) _____	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA _____	MONTHLY (FEB.-MAY) _____	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
IDAHO

Report prepared by

MORLAN W. NELSON Snow Survey Supervisor

and

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SOIL CONSERVATION SERVICE
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DEPARTMENT OF RECLAMATION
BOISE, IDAHO

WATER SUPPLY OUTLOOK for IDAHO



GENERAL SUMMARY FOR APRIL 1, 1964

* The water supply outlook for Idaho is close to normal for the entire *
* state excepting the Palouse and Malad Rivers. March storms made up for *
* the February deficiency in snowfall and precipitation. Snow cover var- *
* ies from 80% of normal on the Teton River to 232% on the Palouse River. *
* The valley and foothill elevations have experienced heavy snowfall *
* throughout the winter. At this time, the valley and south slope snow *
* cover is melting while the high elevation has not yet started the major *
* snow-melt. Soil moisture conditions beneath the snow pack are good. *
* The soils are unfrozen and expected to absorb considerable snow-water *
* as melting progresses. Streamflow forecasts for the irrigation season *
* vary from 74% of normal on the Bear River to 106% on the Priest River. *
* Reservoir storage in general is good with only a few reservoirs below *
* their average for this time of the year. *

The SPOKANE RIVER watershed is one of the low and intermediate elevation drainages in Idaho. The 1964 snowfall pattern has been heaviest in relation to normal at these elevations. This is reflected in the 123% of normal snow-water content and 105% of normal seasonal streamflow forecast for this watershed.

The PALOUSE RIVER, with its limited drainage, falls within the zone of high snowfall for this season. The heavy snow pack on this river may produce fast and heavy volumes of water if the snow-melt is rapid and/or continuous. The soil mantle on the Palouse watershed cannot absorb the water presently held in the snow pack after the first several days of significant snow-melt.

The CLEARWATER RIVER has a heavy snow cover in the lower and middle elevations such as represented by Pierce Ranger Station. However, the higher elevation snow cover is generally below normal. This distribution of snow cover could result in a fast runoff followed by a drop in streamflow earlier than usual in the season. The same general conditions apply to the SALMON RIVER.

The SNAKE, HENRY'S FORK and TETON RIVERS have a variable snow cover. On these rivers, the higher snow courses are well below normal in water content, whereas, the foothill and valley elevations have an unusually heavy snow pack. The water supply outlook is for near normal supplies on these drainages due to good storage in the reservoirs and forecasts for near average seasonal streamflow.

The southern tributaries below American Falls, such as the RAFT RIVER, GOOSE CREEK, TRAPPER CREEK, SALMON FALLS CREEK, BRUNEAU and OWYHEE RIVERS, all have near normal snow cover. Large middle elevation plateau areas have a very heavy snow pack. The snow at this elevation is expected to add a significant amount to runoff on these rivers for 1964 and bring them up to or over their average flow for the irrigation season. Reservoir-stored water on these rivers is close to or slightly below normal.

The BIG and LITTLE LOST RIVERS have had the best snowfall experienced for several years. Reservoir-stored water and forecasted streamflow is close to normal.

The BIG and LITTLE WOOD RIVERS vary in snow cover from 82% to 101% of normal respectively. Seasonal streamflow on these rivers are forecast for close to normal. Reservoir-stored water is near average.

The BOISE and PAYETTE RIVERS have a heavy snow pack at low elevations, although the high snow courses indicate well below normal snow-water. Spring rainfall on these rivers will determine whether or not the middle and low elevation snow cover produces significant runoff. If the snow-melt at these elevations is slow and steady, much of the water will be used or held by the soil. On the other hand, normal spring rains and normal snow-melt for this part of the snow pack would produce a significant amount of runoff into the reservoir. Reservoir storage is excellent at this time.

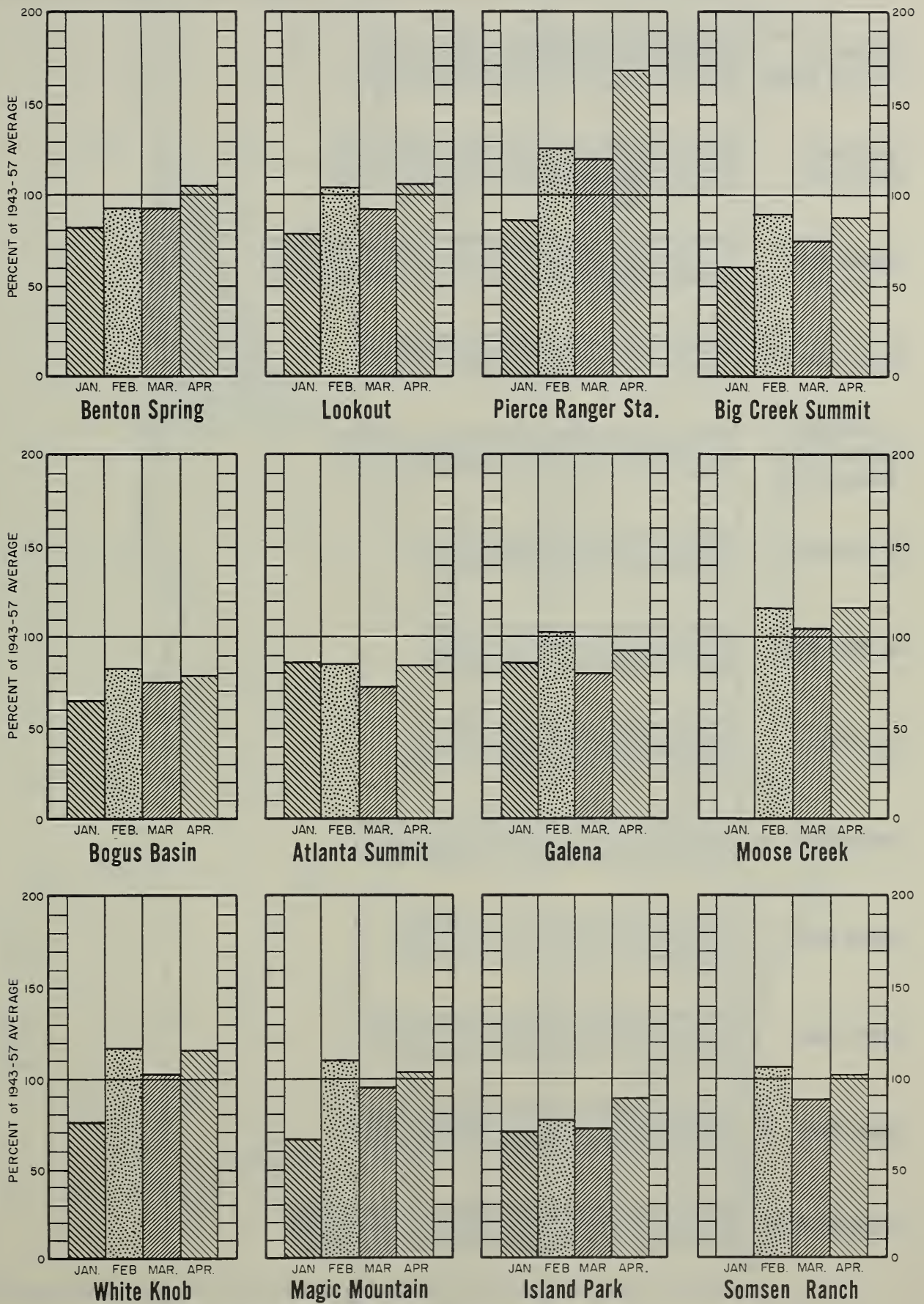
The temperature and rainfall during April will determine the production of runoff from the snow pack. Forecasts, as shown, assume near normal temperature and precipitation conditions.

SNOW WATER DEPTHS ACCUMULATION

For Selected Snow Courses

As Compared To 1943-57 15Yr. Average

APRIL 1, 1964



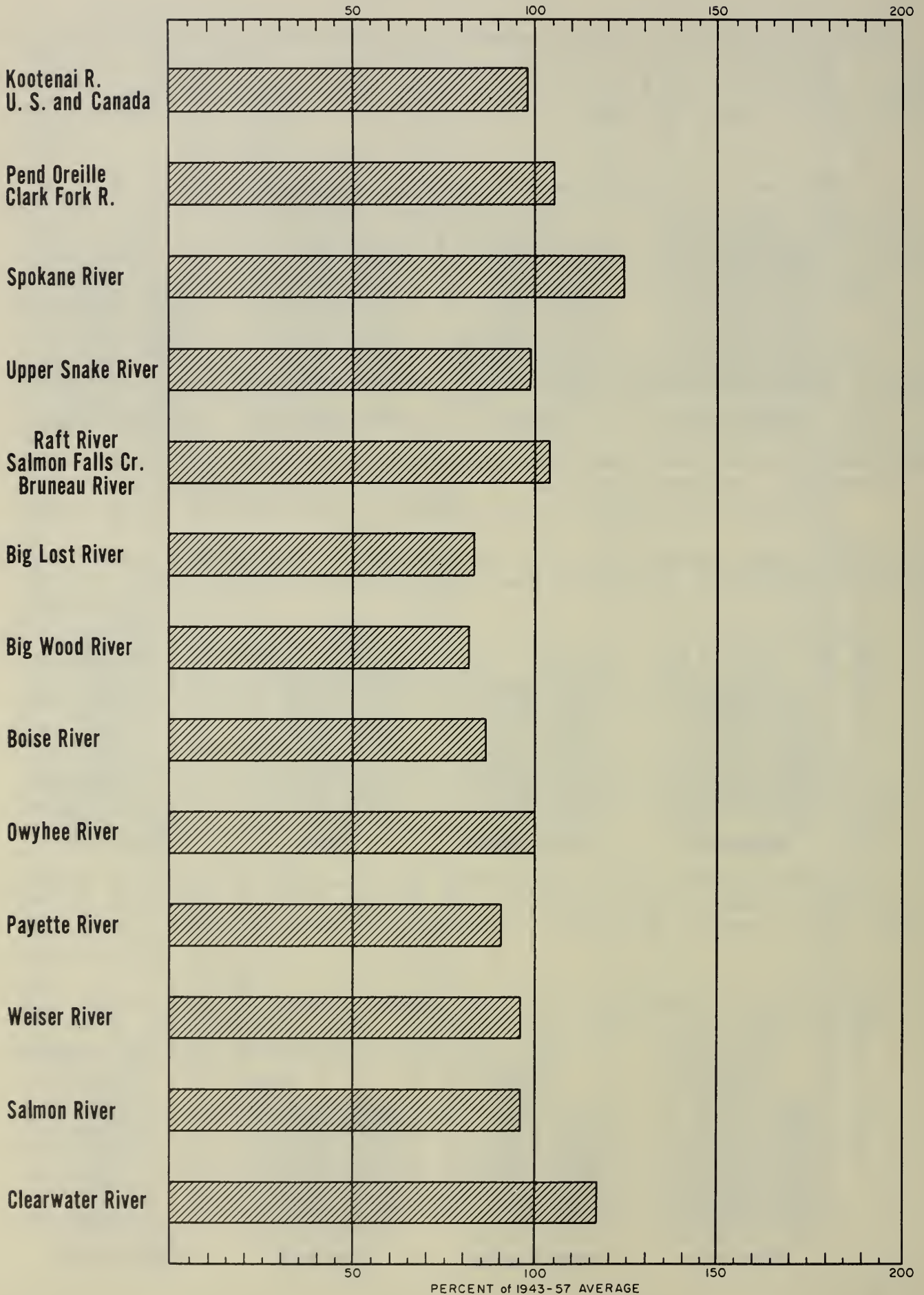
SNOW WATER DEPTHS

BY DRAINAGE

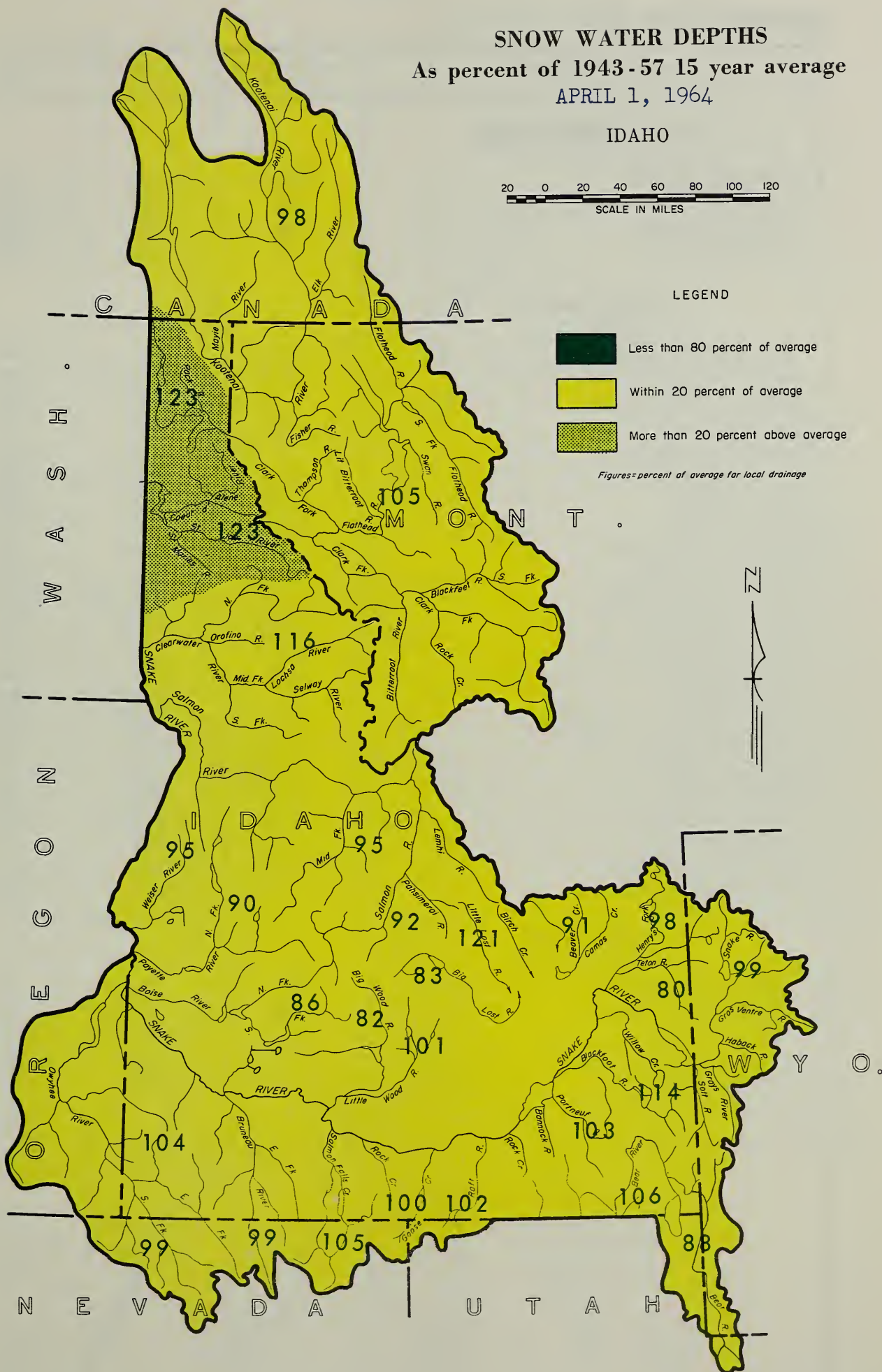
Compared To The 1943 - 57 15 Yr. Average

Snow Cover as of Approximately

APRIL 1, 1964



A horizontal scale bar with alternating black and white segments. Above the bar are numerical markings at 20, 0, 20, 40, 60, 80, 100, and 120. Below the bar is the text "SCALE IN MILES".



COMPARISON of SNOW COVER

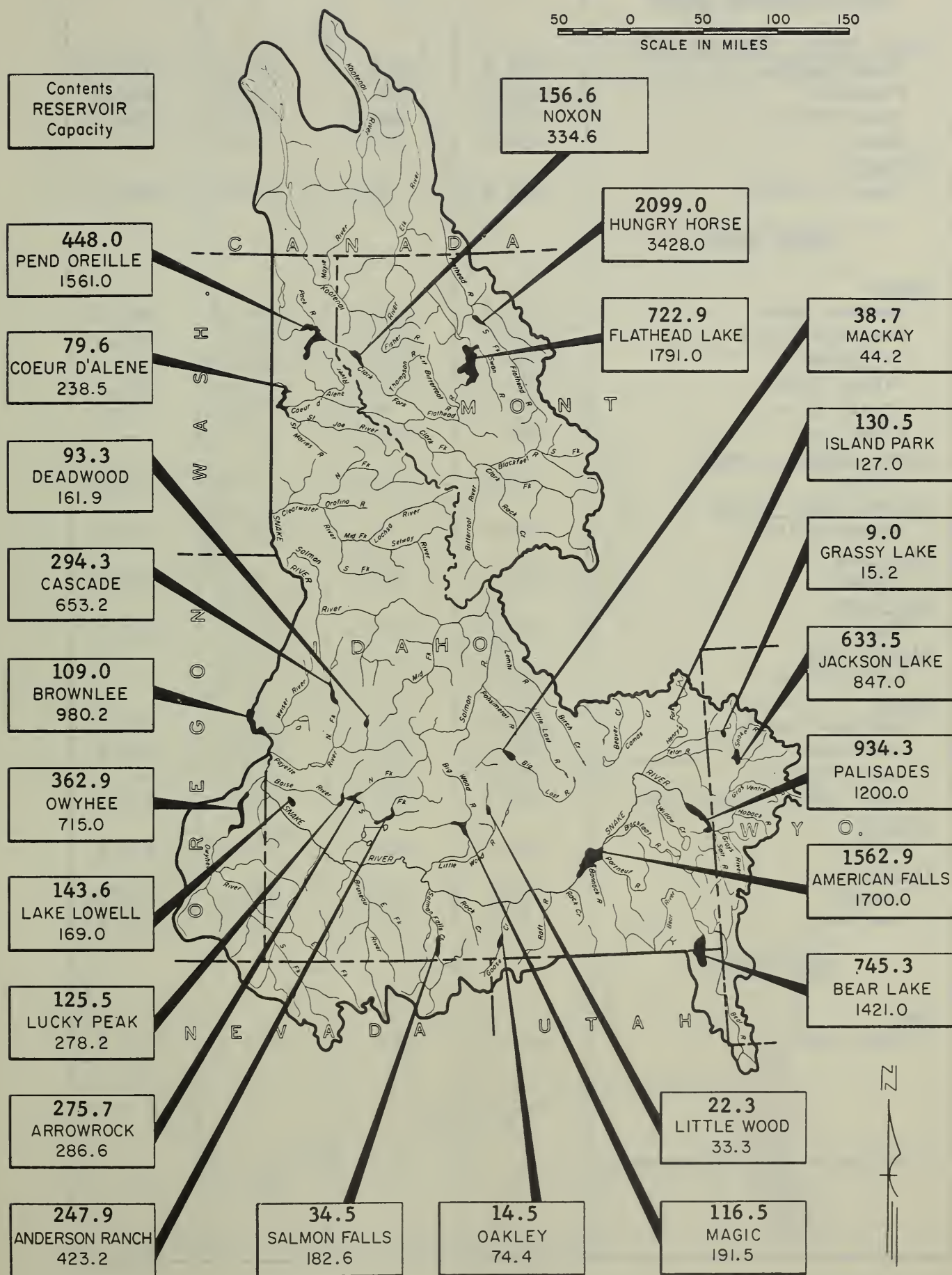
RIVER BASIN WATERSHED	NO.OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	AVERAGE <i>b</i>
<u>UPPER COLUMBIA BASIN</u>			
Kootenai River	14	159	98
Pend Oreille-Clark Fork	52	150	105
Priest River	2	354	123
Spokane River	9	222	123
<u>SNAKE BASIN</u>			
Upper Snake River	21	156	99
Medicine Lodge-Mud Lake	3-5	283	91
Henry's Fork River	3	206	98
Teton River	2	155	80
Blackfoot River	4	218	114
Portneuf River	4	187	103
Raft River	3-8	207	102
Goose Creek	2	229	100
Salmon Falls Creek	9	222	105
Bruneau River	5	168	99
Little Lost River	5	349	121
Big Lost River	5-10	136	83
Big Wood River	8	139	82
Little Wood River	3-6	155	101
Boise River	11	161	86
Owyhee River - Nevada	11	345	99
Owyhee River - Idaho	2-10	--	104
Payette River	9-13	189	90
Weiser River	2-4	189	95
Salmon River	12-14	144	95
Lemhi River	5	165	--
Clearwater River	10-18	173	116
Palouse River	5	1471	232
<u>GREAT BASIN</u>			
Upper Bear River	13	135	88
Montpelier Creek	4	169	--
Mink Creek	3-4	222	102
Cub River	3	224	106
Malad River	2	442	178

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

APRIL 1, 1964

50 0 50 100 150
SCALE IN MILES



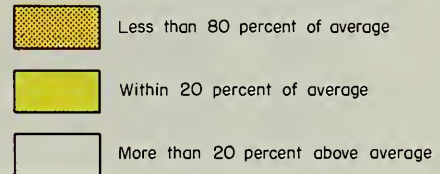
RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943 - 57 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork - Pend Oreille</u>				
Hungry Horse	3428.0	2099.0	2842.0	2177.0*
Flathead	1791.0	722.9	758.8	628.8
Pend Oreille	1561.0	448.0	678.5	504.2
Noxon	334.6	156.6	179.9	--
<u>Spokane</u>				
Coeur d'Alene	238.5	79.6	163.9	162.2
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	847.0	633.5	599.3	465.5
American Falls	1700.0	1562.9	1679.3	1517.7
Palisades	1200.0	934.3	1074.4	--
Island Park	127.0	130.5	133.4	120.2
Grassy Lake	15.2	9.0	11.9	13.2
Brownlee	980.2	109.0	737.0	--
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	14.5	18.8	22.6
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	34.5	40.4	37.0
<u>Big Lost</u>				
Mackay	44.2	38.7	36.4	35.1
<u>Big Wood</u>				
Magic	191.5	116.5	180.7	122.1
<u>Little Wood</u>				
Little Wood	33.3	22.3	26.7	--
<u>Boise</u>				
Anderson Ranch	423.2	247.9	315.3	183.0*
Arrowrock	286.6	275.7	276.9	186.8
Lucky Peak	278.2	125.5	203.4	--
Lake Lowell (Deer Flat)	169.0	143.6	151.7	146.7
<u>Owyhee</u>				
Owyhee	715.0	362.9	362.9	539.0
<u>Payette</u>				
Cascade	653.2	294.3	603.8	236.0*
Deadwood	161.9	93.3	106.0	91.4
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	745.3	777.4	848.8
* Estimated 1943-57 Average				

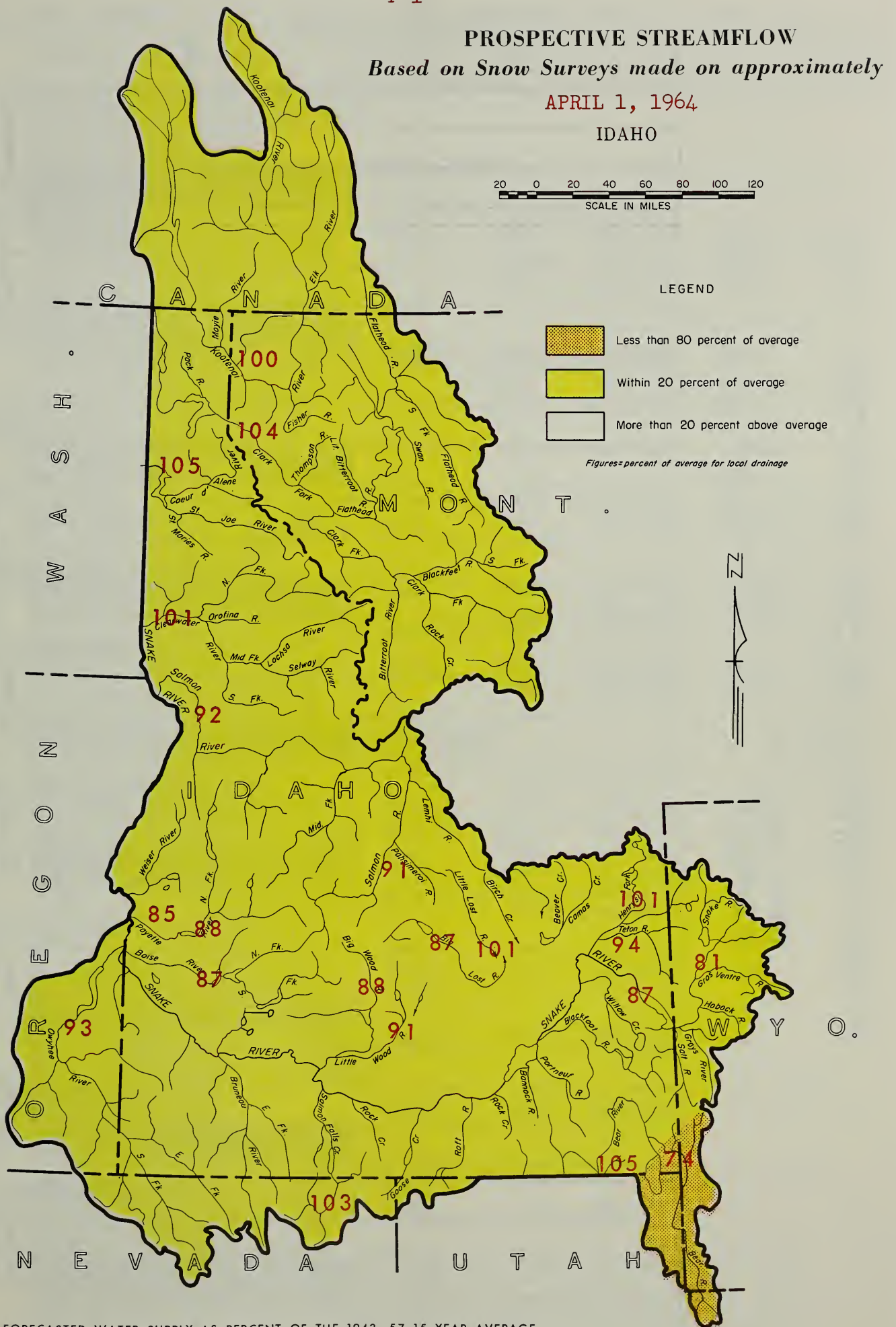
PROSPECTIVE STREAMFLOW
Based on Snow Surveys made on approximately
APRIL 1, 1964
IDAHO

20 0 20 40 60 80 100 120
SCALE IN MILES

LEGEND







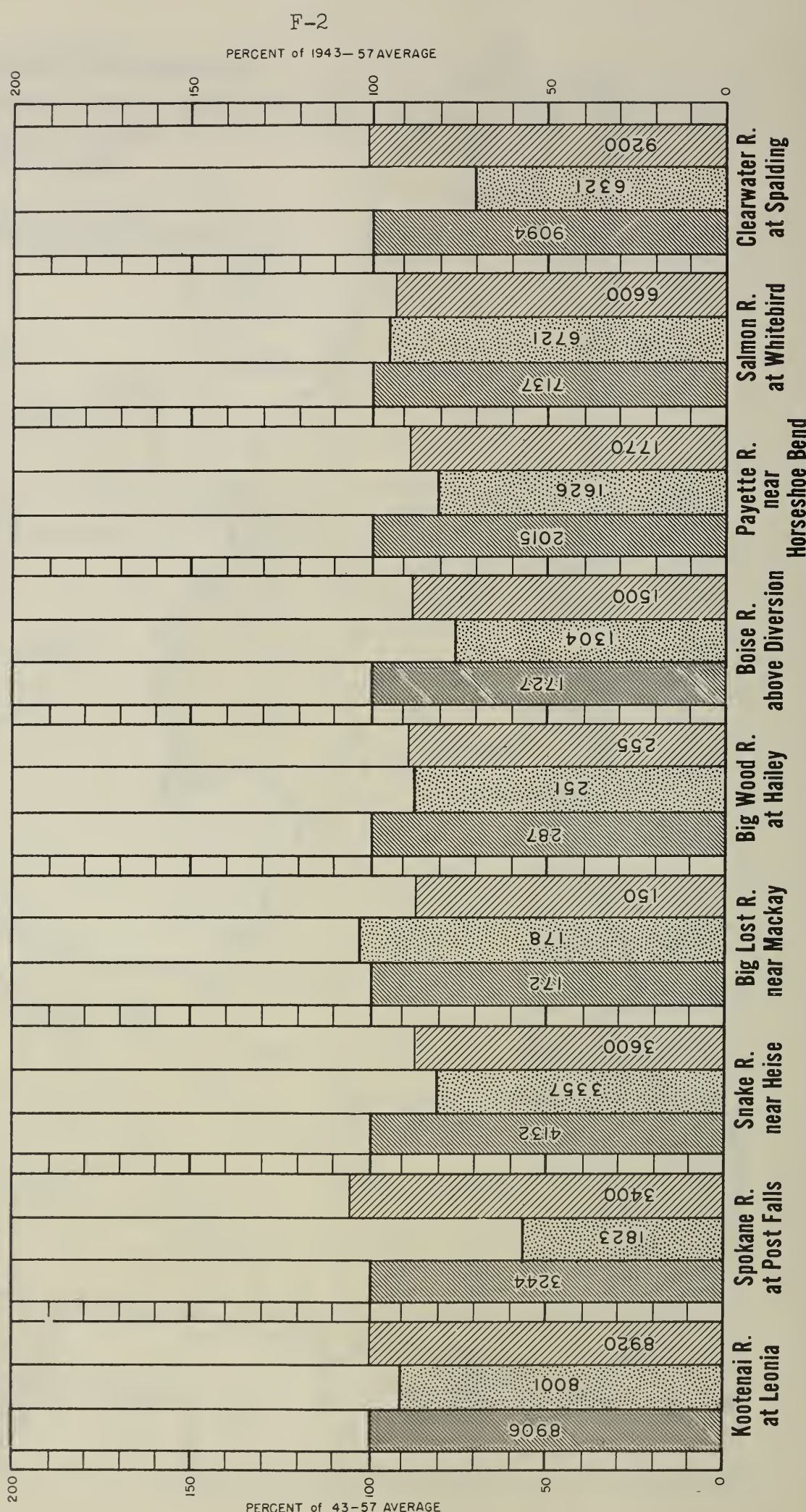
Figures: percent of average for local drainage



FORECASTED WATER SUPPLY AS PERCENT OF THE 1943-57 15 YEAR AVERAGE

STREAMFLOW FORECASTS (April through September period) Based on Snow Surveys made on approximately APRIL 1, 1964

 15 Yr. Average Flow 1943-57
 Last Years Flow
 This Years Forecast
 1 2 3 Flow in Thousands of Acre Feet



1

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair", "Average" or "Excellent")^a and **STREAMFLOW FORECASTS** (1,000 Ac. Ft.)^c

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
UPPER COLUMBIA BASIN					
KOOTENAI RIVER					
Leonia	(at)	Avg.	8920	Apr-Sep	8907 100
			7860	Apr-Jul	7817 100
			6260	Apr-Jun	6255 100
PEND OREILLE RIVER					
Clark Fork River					
Whitehorse Rapids	(at)	Avg.	14450	Apr-Sep	13932 104
			13250	Apr-Jul	12763 104
			11270	Apr-Jun	10816 104
Priest River					
Priest River 1/	(nr)	Avg.	960	Apr-Jul	904 106
SPOKANE RIVER					
Post Falls 2/	(at)	Avg.	3400	Apr-Sep	3242 105
Coeur d'Alene River					
Cataldo	(nr)	Avg.	1380	Apr-Sep	1322 104
			1325	Apr-Jul	1263 105
St. Joe River					
Calder	(at)	Avg.	1410	Apr-Sep	1391 101
			1360	Apr-Jul	1323 103
SNAKE RIVER BASIN					
SNAKE RIVER - MAIN STEM					
Moran 3/	(at)	Avg.	750	Apr-Sep	928 81
Heise 4/	(nr)	Avg.	3600	Apr-Sep	4132 87
Blackfoot 5/	(nr)	Avg.	3650	Apr-Jul	4239 86
Weiser	(at)	Avg.	6600	Apr-Sep	7725 85
Henry's Fork					
Ashton 6/	(nr)	Avg.	640	Apr-Sep	632 101
Rexburg 7/	(nr)	Avg.	1290	Apr-Sep	1318 98
Teton River					
St. Anthony	(nr)	Avg.	400	Apr-Sep	425 94
Blackfoot River					
Blackfoot Reservoir Inflow		Avg.	125	Apr-Sep	-- --
Portneuf River					
Topaz	(at)	Avg.	90	Mar-Sep	-- --

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow corrected for storage in Priest Lake. 2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie canals. 3/ Corrected for storage in Jackson Lake. 4/ Corrected for storage in Jackson Lake and Palisades. 5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake and diversions between Heise and Blackfoot. 6/ Corrected for storage in Henry's Lake and Island Park Reservoir. 7/ Corrected for storage in Henry's Lake, Island Park, Grassy Lake and diversions between Ashton and Rexburg.

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair"^a and "Average" or "Excellent") and STREAMFLOW FORECASTS (1,000 Ac. Ft.)^c

STREAM and/or FORECAST POINT		OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
<u>Salmon Falls Creek</u>						
San Jacinto	(nr)	Avg.	90	Mar-Sep	88	103
			88	Mar-Jul	85	104
<u>Bruneau River</u>						
Hot Springs	(nr)	Avg.	225	Mar-Sep	235	96
<u>Little Lost River</u>						
Howe	(nr)	Avg.	38	Mar-Sep	37.5	101
<u>Big Lost River</u>						
Howell Ranch	(at)	Avg.	125	Apr-Jun	139	90
Mackay <u>1/</u>	(nr)	Avg.	150	Apr-Sep	172	87
<u>Big Wood River</u>						
Hailey <u>2/</u>	(at)	Avg.	300	Apr-Sep	340	88
Magic Reservoir Inflow <u>3/</u>		Avg.	270	Mar-Jul	309	87
<u>Little Wood River</u>						
High Five Creek	(ab)	Avg.	80	Apr-Sep	87	91
<u>Boise River</u>						
Twin Springs	(nr)	Avg.	700	Apr-Sep	791	88
			650	Apr-Jul	737	88
Boise <u>4/</u>	(nr)	Avg.	1500	Apr-Sep	1727	87
<u>South Fork</u>						
Anderson Dam <u>5/</u>	(at)	Avg.	550	Apr-Sep	646	85
<u>Owyhee River</u>						
Gold Cr., Nev. <u>6/</u>	(nr)	Avg.	24	Apr-Jul	26.8	89
Owyhee, Nev. <u>6/</u>	(nr)	Avg.	70	Apr-Jul	86.3	81
Lake Owyhee		Avg.	400	Apr-Sep	430	93
net inflow <u>7/</u>		Avg.	385	Apr-Jul	412	93
<u>Payette River</u>						
Horseshoe Bend <u>8/</u>	(nr)	Avg.	1770	Apr-Sep	2016	88
<u>North Fork</u>						
Cascade <u>9/</u>	(at)	Avg.	550	Apr-Sep	618	89
Banks <u>9/</u>	(nr)	Avg.	705	Apr-Sep	793	89
			690	Apr-Jul	765	90
<u>South Fork</u>						
Banks <u>10/</u>	(nr)	Avg.	970	Apr-Jul	1077	90

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow corrected for storage in Mackay Reservoir and diversion in Sharp Ditch. 2/ Combined discharge of Big Wood River and Big Wood Slough corrected for diversions. 3/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine. 4/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak. 5/ Corrected for storage in Anderson Ranch Reservoir. 6/ Corrected for storage in Wild Horse Reservoir. 7/ From U.S.B.R. records of inflow. 8/ Corrected for storage in Cascade and Deadwood Reservoirs. 9/ Corrected for storage in Cascade Reservoir. 10/ Corrected for storage in Deadwood Reservoir.

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair" ^a) and **STREAMFLOW FORECASTS** (1,000 Ac. Ft.) ^c

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
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Weiser River

Weiser ab. Crane Creek <u>1/</u>	(at)	Avg.	610	Mar-Sep	575	106
-------------------------------------	------	------	-----	---------	-----	-----

Salmon River

Whitebird	(at)	Avg.	6600	Apr-Sep	7137	92
Challis	(nr)	Avg.	870	Apr-Sep	959	91
			765	Apr-Jul	839	91

Clearwater River

Spalding	(at)	Avg.	9200	Apr-Sep	9094	101
Kamiah	(at)	Avg.	5000	Apr-Jul	4901	102

North Fork

Ahsahka	(nr)	Avg.	3180	Apr-Jul	3086	103
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GREAT BASINBEAR RIVER

Harer	(at)	Poor	220	Apr-Sep	299	74
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Montpelier Creek

Montpelier	(nr)	Avg.	13.5	Apr-Sep	13.1	103
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Cub River

Preston	(nr)	Avg.	55	Apr-Sep	52	105
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(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow of Weiser River nr. Weiser minus observed flow of Crane Creek at mouth.

VALLEY PRECIPITATION 1/

Division Averages and Departures In Inches

DRAINAGE DIVISIONS	Fall		Winter	
	Sep.-Oct.-Nov. 1963		Dec. 1963-Mar. 1964	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U. S.	7.28	+1.19	8.92	-1.68
Flathead	4.34	-0.87	6.50	-1.15
Clark Fork	3.40	+0.50	3.14	-0.34
Pend Oreille-Spokane	8.05	-0.78	12.71	-1.67
Upper Snake	6.51	+1.68	7.72	-1.01
Snake River Plain	3.00	+0.90	2.73	-0.89
Salmon-Payette-Boise	5.39	+0.68	7.86	-1.58
Clearwater	5.46	-1.24	9.85	-1.03
Southeastern Oregon	3.32	+0.95	3.25	-1.24

1/ Preliminary analysis by U. S. Weather Bureau from data furnished by Meterological Service of Canada and U. S. Weather Bureau.

2/ Departure from 15-year (1943-57) drainage division average.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

UPPER COLUMBIA BASINKOOTENAI RIVER

Smith Creek	16A1	4800	3/29	147	57.7	33.3	49.6
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PRIEST RIVER

Benton Meadow	16A2	2344	3/31	24	7.9	0.0	3.0
Benton Spring	16A3	4900	3/30	65	24.0	9.0	22.9
Schweitzer Bowl	16A6	4500	3/31	89	32.8	--	--
Schweitzer Ridge	16A5	6100	3/31	137	55.8	--	--

SPOKANE RIVER

Above Burke	15B8	4100	3/17	93	30.5	13.1	21.0
Above Roland	15B7	4350	3/16	114	38.7	16.9	29.8
Copper Ridge	16B2	4800	3/31	105	44.3	12.0	32.8
Fourth of July Summit	16B3	3100	3/30	46	16.8	T	--
Granite Peak	15B13	6000	3/30	125	49.6	38.0	--
Kellogg Peak	16B5	5560	3/16	102	34.6	13.4	31.2
Kellogg Peak (A)	16B5	5560	3/30	106	38.4	--	--
Lookout	15B2	5250	3/17	117	40.4	22.0	34.5*
Lookout	15B2	5250	3/30	113	41.6	24.1	39.3*
Lower Sands Creek	16B1	3400	3/31	78	30.4	8.6	21.4*
Medicine Ridge	15B4	6150	3/30	124	49.1	--	--
Mosquito Ridge	16A4	5110	3/16	123	44.4	--	--
Mosquito Ridge (A)	16A4	5110	3/30	125	48.1	25.0	39.6
Outlaw Creek	15B12	3750	3/30	62	21.9	13.7	--
Roland Summit	15B5	5200	3/16	132	44.0	20.7	38.5
Sherwin	16C1	3200	3/27	66	23.0	3.6	--
Sunset	15B9	5600	3/16	117	38.0	23.8	31.9
Sunset (A)	15B9	5600	3/30	122	42.3	--	--

SNAKE BASINMEDICINE LODGE - MUD LAKE DRAINAGES

Blue Ledge Mine	11E11	6700	3/27	47	14.5	7.2	17.3
Camp Creek	12E3	6800	3/26	34	9.1	2.3	10.4
Irving Creek	12E4	7035	3/25	23	4.9	1.2	--
Kilgore	11E12	6200	3/27	35	11.0	4.2	10.3
Webber Creek	12E5	6700	3/25	23	4.4	0.6	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

HENRY'S FORK - TETON RIVER

Big Springs	11E9	6500	3/30	65	21.8	10.4	23.6
Black Canyon	11E18	7850	3/30	96	34.5	20.2	--
Black Moose	11E19	8125	3/30	104	38.3	25.6	--
Darby Canyon (A)	10F21	8250	3/31	57	18.6	17.1	--
Grassy Lake	10E15	7230	3/29	97	33.1	22.3	36.7
Island Park	11E10	6315	3/30	51	15.9	8.3	17.8
Latham Springs	11E16	7650	3/30	91	32.8	20.6	--
Lucky Dog	11E14	6900	3/30	66	23.4	10.2	--
Old Road	11E15	7250	3/30	79	23.6	15.2	--
Pine Creek Pass	11F2	6750	3/31	53	19.3	9.8	--
Poacher's Cabin	11E17	8000	3/30	92	33.2	22.2	--
State Line	11F1	6400	3/31	50	16.8	6.5	16.4
Teton Pass	10F13	8500	3/31	85	27.7	22.2	39.1*
Valley View	11E8	6500	3/30	58	19.4	9.0	16.9

BLACKFOOT - PORTNEUF RIVERS

Austin Bros. Ranch	11G3	6450	3/27	44	11.2	1.5	8.3*
China Hat	11G2	6300	3/26	39	9.7	0.0	6.1*
Dempsey Creek	12G5	6280	3/31	41	13.0	6.7	11.6*
Mink Creek	12G1	6300	3/30	53	17.4	6.9	17.4*
Pebble Creek	12G2	6550	3/31	45	15.4	6.3	14.5*
Slug Creek Divide	11G5	7225	3/31	49	16.1	13.2	16.8
Somsen Ranch	11G1	7000	4/1	41	13.0	8.2	12.8*

RAFT RIVER, GOOSE CREEK, SALMON FALLS CREEK, BRUNEAU RIVER

Badger Gulch	14G3	6660	3/28	50	15.1	4.7	14.4*
Bear Creek	15H1	7800	3/28	59	19.8	11.8	21.6*
Bostetter Rgr. Sta.	14G1	7500	3/28	61	20.1	10.7	20.9
Boy Scout Camp	13G2	7600	3/29	41	13.7	7.6	--
Cedar Creek	14G5	7000	3/28	41	12.2	T	12.1*
Clear Creek Meadows	13H2	9050	3/29	61	18.2	12.3	--
Deadline	14G4	6900	3/27	79	26.0	9.6	24.8*
Fox Creek	15H2	6800	3/28	37	12.6	2.1	10.8*
Goat Creek	15H13	8800	3/28	56	18.2	12.8	18.9*
Howell Canyon	13G1	8000	3/29	70	25.9	12.3	28.2*
Hummingbird Springs	15H15	8945	3/28	66	21.2	15.1	22.8*
Magic Mountain	14G2	6700	3/27	64	20.8	8.2	20.0
One Mile Summit	13H1	7330	3/29	30	7.8	5.0	--
Pole Creek Rgr. Sta.	15H14	8330	3/28	64	21.6	13.8	20.5*
Red Point	15H18	7940	3/28	55	17.0	1.8	--
Sheep Hollow	13G5	6200	3/29	23	7.0	1.8	--
Shoshone Basin	14G6	5740	3/28	33	10.2	T	2.8*

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SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b
Sublett	13G3	6000	3/29	48	13.7	3.9	11.8*
Summit Springs	13G4	8500	3/29	41	12.0	2.6	10.8*
Vi Pont	13H3	7650	3/29	44	13.0	8.3	--
Wilson Creek	15G2	7500	3/28	46	14.0	3.7	--

LITTLE LOST RIVER

Fairview Guard Sta.	13E5	5850	3/30	26	7.3	T	5.2*
Lost-Garfield	13E3	5700	3/31	21	5.7	0.0	2.3*
Moonshine	13E6	7250	3/30	44	13.4	5.4	12.1*
Sawmill Canyon	13E4	6000	3/30	33	9.6	3.6	9.2*
Wet Creek Summit	13E7	8175	4/1	42	13.6	5.2	12.2*

BIG LOST RIVER

Bear Canyon	13F3	8600	3/29	52	15.5	12.9	19.3*
Cherry Creek Pass (A)	13F13	8900	3/29	5	1.3	1.3	--
Copper Basin	13F2	8000	3/29	28	8.7	7.0	10.1
Iron Bog	13F11	7650	3/25	43	12.6	6.2	--
Leadbelt	13F12	6800	3/25	33	9.0	3.8	--
Lost-Wood Divide (A)	14F3	8750	3/29	61	19.7	16.7	26.7*
North Fork Meadow (A)	14F15	8150	3/29	37	11.5	10.6	--
Slickrock (A)	13F14	8640	3/29	50	14.9	12.3	--
Stickney Mill	14F2	7500	3/29	30	8.0	7.3	10.0
White Knob	13F1	7700	3/26	37	10.9	4.4	9.4

BIG WOOD RIVER

Dollarhide Summit	14F8	8620	3/28	68	22.2	16.8	28.1*
Galena	14F1	7500	3/27	62	18.7	14.2	20.2
Galena Summit	14F12	8795	3/27	75	24.2	19.4	25.2*
Graham Ranch	14F5	6200	3/26	45	13.2	7.2	14.0
Mascot Mine	14F7	7900	3/24	39	11.3	9.6	17.0
Mount Baldy	14F9	9000	3/26	61	17.6	11.6	22.7*
Soldier Rgr. Sta.	14F11	6100	3/26	33	9.4	2.3	12.0

Little Wood River - Fish Creek

Garfield Rgr. Sta.	13F4	6554	3/30	30	8.8	5.3	10.6*
Iron Mine Creek	13F10	6370	4/1	31	8.8	5.0	--
Muldoon	13F5	6300	3/31	24	7.2	4.9	7.3*
Porcupine (A)	14F14	8350	3/29	53	15.9	12.9	--
Swede Peak	13F9	7500	3/30	48	14.4	12.3	--
Telfer Ranch	13F6	6000	4/1	23	7.4	0.0	5.2*

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SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

BOISE RIVER

Atlanta Summit	15F4	7500	3/28	93	31.6	25.2	37.4
Bad Bear	15F2	5500	3/27	53	17.2	T	--
Bennett Mountain	15F7	6650	3/25	58	18.6	8.6	--
Bogus Basin Road	16F4	5360	3/30	25	8.7	0.0	2.4*
Camas Creeks Divide (A)	15F9	5720	3/25	41	13.2	0.0	--
Couch Summit	14F10	6950	3/26	53	15.6	10.6	21.1*
Danskin (A)	15F10	5650	3/25	37	11.9	T	--
Jackson Peak (A)	15E9	7000	3/28	91	29.9	22.7	36.5*
Little Camas Flat (A)	15F12	4950	3/25	33	10.6	0.0	--
Long Tom (A)	15F13	4550	3/25	21	6.7	0.0	--
Moores Creek Summit	15F1	6100	3/27	93	30.6	12.6	34.9
Prairie	15F6	5600	3/29	31	6.6	0.0	5.1*
Road Creek	15F3	6800	3/28	38	12.1	0.0	12.5*
Trinity Mountain	15F5	7400	3/28	100	34.1	30.1	46.8*
Willow Creek Cabin (A)	15F11	4710	3/25	24	7.7	0.0	--

OWYHEE RIVER

Antelope Ridge	16G6	5900	3/25	35	10.9	T	--
Battle Creek (A)	16G9	5700	3/26	27	8.1	0.0	--
Bear Creek	15H1	7800	3/28	59	19.8	11.8	21.6*
Bull Basin (A)	16G10	5600	3/26	6	1.8	0.0	--
Fox Creek	15H2	6800	3/28	37	12.6	2.1	10.8*
Hyde Pasture	16G5	5800	3/25	29	8.4	T	--
Mud Flat	16G7	5500	3/25	33	9.2	0.2	--
Red Canyon (A)	16G11	6650	3/26	29	8.7	0.2	--
Seventy-six Creek	15H3	7100	3/31	33	11.4	3.9	15.7*
Silver City	16F3	6400	3/28	52	17.7	0.8	17.5*
South Mountain	16G1	6340	4/2	40	13.0	0.7	12.1*
Succor Creek (A)	16F6	6100	3/26	32	9.6	T	--
Triangle	16G4	5150	3/25	7	1.8	T	--

PAYETTE RIVER

Big Creek Summit	15E2	6608	3/31	87	32.1	25.8	37.6
Bogus Basin	16F2	6120	3/30	63	21.3	8.4	27.0*
Cozy Cove	15E8	5900	3/27	54	17.1	4.1	17.5*
Crawford Rgr. Sta.	15E3	4800	3/31	33	9.7	T	6.8*
Deadwood Airstrip	15E10	5440	3/27	50	15.9	3.5	--
Deadwood Dam	15E7	5500	3/27	53	16.1	4.7	18.3*
Deadwood Summit	15E4	7000	3/28	106	38.6	35.8	48.5
Greenfield Flat (A)	16E7	7370	3/28	110	40.6	35.6	--
High Valley Summit	16E4	5170	3/30	50	17.4	1.4	--
Lake Fork	15E1	6000	3/27	68	20.3	6.2	17.4

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SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

Rock Flat Summit	16E1	5200	3/27	66	19.3	7.6	20.0*
Silver Creek Ridge	15E5	5700	3/28	54	19.0	--	--
Squaw Meadow	15D2	5800	3/29	96	35.0	22.6	39.9*
Tripod Summit	16E3	5200	3/28	64	21.3	5.6	--

WEISER RIVER

Boulder Creek	16D1	5500	3/26	80	25.0	11.1	24.7
Mica Ridge (A)	16E6	6800	3/28	95	35.1	21.6	--
Placer Creek	16E2	6000	3/30	56	16.7	7.9	19.2
Squaw Flat (A)	16E5	6230	3/28	74	27.3	14.4	--

SALMON RIVER

Big Creek Summit	15E2	6608	3/31	87	32.1	25.8	37.6
Borah (A)	13E8	8250	4/3	24	7.2	--	--
Chapman Creek	16D2	4215	3/30	22	6.7	0.0	1.0*
Deadwood Summit	15E4	7000	3/28	106	38.6	35.8	48.5
Galena Summit	14F12	8795	3/27	75	24.2	19.4	25.2*
Gibbons Pass	13D2	7100	3/30	70	23.3	16.6	25.4
Johns Creek	16D3	3805	3/30	12	4.1	0.0	0.8*
Mill Creek Summit	14E1	8870	4/2	67	20.7	16.0	24.0
Moose Creek	13D16	6200	3/27	63	20.5	8.2	17.7
Morgan Creek Summit	14E4	7580	4/1	43	12.9	9.0	--
Redfish Lake	14E2	6600	3/25	36	9.8	--	--
Rock Flat Summit	16E1	5200	3/27	66	19.3	7.6	20.0*
Twin Peaks (A)	14E3	10300	4/3	78	24.1	20.1	--
Vienna Mine	14F4	8900	3/29	95	33.6	30.2	38.8*
Whitebird Summit	16D5	4390	3/30	30	9.5	T	5.0*
Williams Creek Summit	14D4	7800	3/30	37	12.7	8.0	15.0

Lemhi River

Above Gilmore	13E19	8200	3/28	38	9.9	7.0	--
Aspen-Hall Pass	13E21	8110	3/29	36	8.6	--	--
Copes Camp	13E17	7500	3/27	36	8.3	5.9	--
Gertson Creek (A)	13D17	8050	4/2	44	13.2	2.2	--
Hall Creek	13E20	7560	3/29	22	4.9	--	--
Meadow Lake	13E18	9100	3/28	64	20.4	12.9	--
Schwartz Lake	13E16	8500	3/27	52	11.7	10.4	--

CLEARWATER RIVER

Above Greer	16C11	1240	4/1	0	0.0	0.0	--
Cayuse Airstrip	15C3	3700	3/31	42	16.3	1.1	10.8*
Coolwater Mountain	15C7	6200	3/31	94	37.5	20.8	--
Crater Meadows	15C9	6100	3/31	121	52.2	38.0	--

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SNOW

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			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b
Elk Butte	16C15	5550	3/30	132	52.7	22.6	--
Fish Lake Airstrip	15C2	5000	3/31	125	50.5	26.6	42.6*
Forest	16C9	4550	3/27	39	11.6	0.0	--
Forty-nine Meadows	15B3	5000	3/30	103	40.6	24.3	39.6
Goat Lake	14C9	6600	3/31	123	52.8	45.7	--
Granite Peak	15B13	6000	3/30	125	49.6	38.0	--
Greer Summit	16C13	3000	4/1	0	0.0	0.0	--
Hemlock Butte	15C6	5500	3/31	158	66.1	40.6	--
Kit Carson Pasture	14D3	5020	3/30	35	12.4	4.3	9.0
Lolo Pass	14C5	5230	3/26	100	36.6	21.8	36.7*
Lost Lake	15B14	6000	3/30	163	71.7	44.2	--
McCann	16C8	4300	3/27	34	9.7	0.0	--
Medicine Ridge	15B4	6150	3/30	124	49.1	--	--
Midway	16C12	2200	4/1	0	0.0	0.0	--
Nez Perce Pass	14D1	6575	3/30	58	21.0	9.7	19.7
Orogrande Mountain	15D4	7800	3/31	114	43.6	30.5	--
Pierce Ranger Station	15C5	3171	3/27	60	18.1	2.5	10.9*
Powell Ranger Station	14C6	4230	3/26	53	19.5	6.4	14.0*
Savage Pass	14C4	6600	3/27	89	31.6	21.8	30.3*
Shanghai Summit	15C4	4600	3/30	91	36.1	11.6	30.5
Sweeney	16C10	4435	3/27	35	9.6	0.0	--

PALOUSE RIVER

Crumarine Creek	16C6	3500	3/28	36	15.3	0.0	4.5*
East Twin	16C3	4000	3/28	64	26.8	0.6	10.2*
Howard Creek	16C5	3500	3/28	33	12.3	0.0	0.0*
Moscow Mountain	16C2	4800	3/28	75	28.3	5.6	18.9*
West Twin	16C4	4200	3/28	47	17.3	0.6	9.5*

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NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

GREAT BASIN**BEAR RIVER**

Emigrant Summit	11G6	7350	3/27	83	23.8	16.8	25.7
Emigration Canyon	11G7	6500	3/27	47	12.2	7.2	10.7*

Montpelier Creek

Giveout	11G16	6840	3/30	44	13.4	7.8	--
Little Beaver	11G20	6970	3/30	56	17.4	11.2	--
Montpelier Creek	11G18	6570	3/30	31	8.7	4.0	--
Whiskey Flat	11G21	6985	3/30	30	8.9	5.6	--

Mink Creek

Christensen Ranch	11G11	5600	3/27	41	10.6	0.0	8.7*
Dry Basin (A)	11G14	7900	4/4	72	26.3	20.8	--
Horseshoe Basin (A)	11G15	8000	4/4	67	24.5	20.8	--
Liberty Spring	11G13	8600	4/1	97	35.4	24.7	--
Strawberry Creek	11G9	5800	3/25	45	13.1	0.0	12.4*
Strawberry Mink Divide	11G10	6800	3/26	74	21.4	11.5	23.3*

Cub River

Cub River R. S.	11G12	5400	3/26	42	11.4	0.0	7.4*
Franklin Basin	11G8	8000	3/30	74	25.2	21.1	29.2
Willow Flat	11G4	6100	3/26	60	18.1	3.3	15.1*

MALAD RIVER

Dry Creek Flat	12G4	6350	3/30	31	10.1	0.0	3.7*
Oxford Mountain	12G3	6800	3/30	36	11.1	4.8	8.2*

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APPENDIX

SNOW

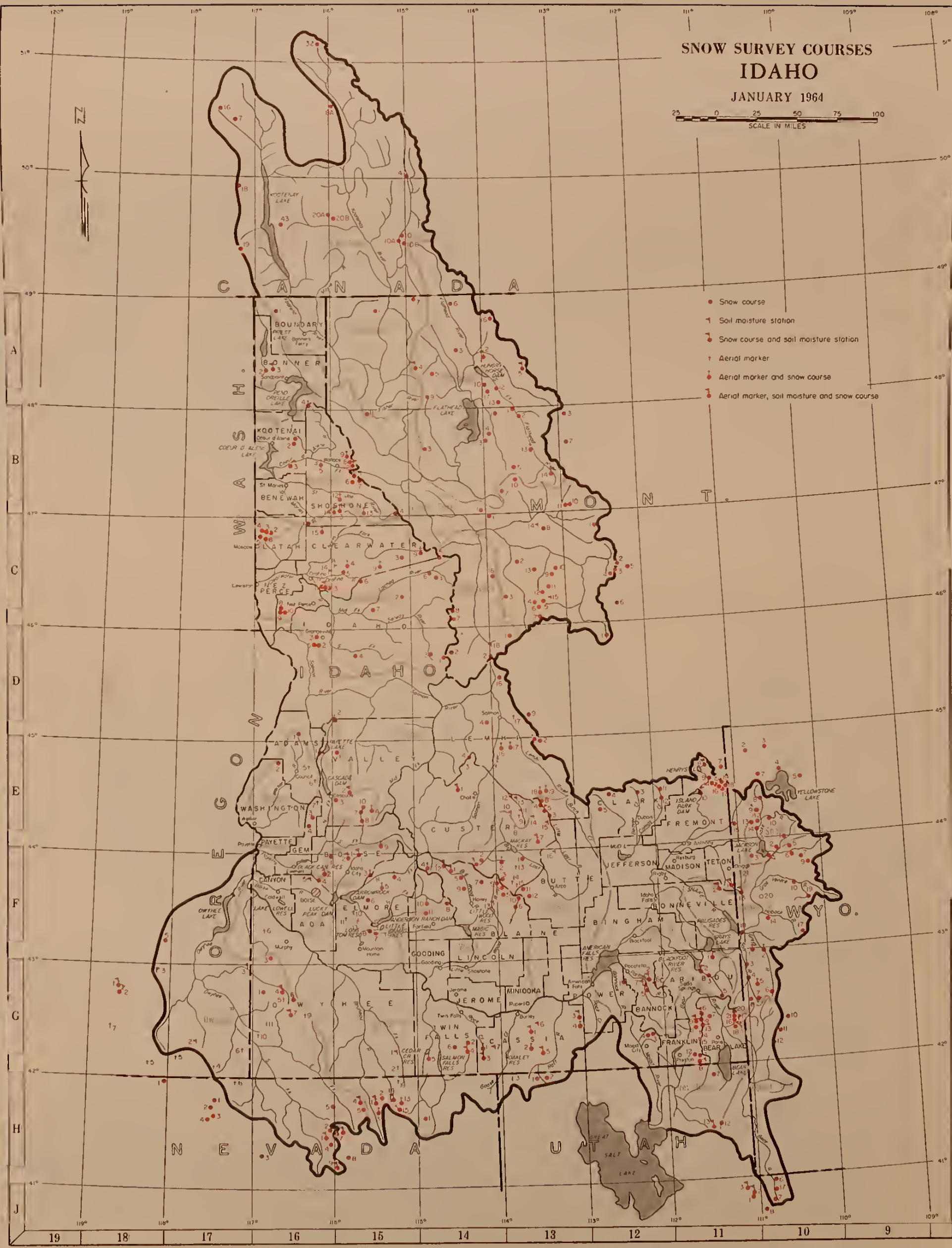
DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
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SNOW SURVEY COURSES IDAHO

JANUARY 1964

25 0 25 50 75 100
SCALE IN MILES



Index to IDAHO SNOW COURSES

KOOTENAI RIVER							PRIEST RIVER							PEND OREILLE - CLARK FORK RIVER							BITTERROOT RIVER							FLATHEAD RIVER							SPOKANE RIVER													
NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.							
13781	W	Barco Creek	36	24N	114W	5500	13824	W	Blind Bull	6	34N	115W	8750	13824	W	Blind Bull	6	34N	115W	8750	13824	W	Blind Bull	6	34N	115W	8750	13824	W	Blind Bull	6	34N	115W	8750	13824	W	Blind Bull	6	34N	115W	8750	13824	W	Blind Bull	6	34N	115W	8750
13782	W	Brush Creek	11	24N	114W	5000	13825	W	Bryan Flat	9	38N	115W	6250	13825	W	Bryan Flat	9	38N	115W	6250	13825	W	Bryan Flat	9	38N	115W	6250	13825	W	Bryan Flat	9	38N	115W	6250	13825	W	Bryan Flat	9	38N	115W	6250	13825	W	Bryan Flat	9	38N	115W	6250
13783	W	Butterfly Creek	11	24N	114W	5000	13826	W	Canyon	44°44'	38N	115W	7750	13826	W	Canyon	44°44'	38N	115W	7750	13826	W	Canyon	44°44'	38N	115W	7750	13826	W	Canyon	44°44'	38N	115W	7750	13826	W	Canyon	44°44'	38N	115W	7750	13826	W	Canyon	44°44'	38N	115W	7750
13784	W	Butterfly Creek	11	24N	114W	5000	13827	W	COO Camp	25	29N	118W	7400	13827	W	COO Camp	25	29N	118W	7400	13827	W	COO Camp	25	29N	118W	7400	13827	W	COO Camp	25	29N	118W	7400	13827	W	COO Camp	25	29N	118W	7400	13827	W	COO Camp	25	29N	118W	7400
13785	W	Butterfly Creek	11	24N	114W	5000	13828	W	Cottonwood Lake	9	31N	116W	7400	13828	W	Cottonwood Lake	9	31N	116W	7400	13828	W	Cottonwood Lake	9	31N	116W	7400	13828	W	Cottonwood Lake	9	31N	116W	7400	13828	W	Cottonwood Lake	9	31N	116W	7400	13828	W	Cottonwood Lake	9	31N	116W	7400
13786	W	Butterfly Creek	11	24N	114W	5000	13829	W	Cottonwood Lake	25	31N	116W	7400	13829	W	Cottonwood Lake	25	31N	116W	7400	13829	W	Cottonwood Lake	25	31N	116W	7400	13829	W	Cottonwood Lake	25	31N	116W	7400	13829	W	Cottonwood Lake	25	31N	116W	7400	13829	W	Cottonwood Lake	25	31N	116W	7400
13787	W	Butterfly Creek	11	24N	114W	5000	13830	W	Cottonwood Lake	25	31N	116W	7400	13830	W	Cottonwood Lake	25	31N	116W	7400	13830	W	Cottonwood Lake	25	31N	116W	7400	13830	W	Cottonwood Lake	25	31N	116W	7400	13830	W	Cottonwood Lake	25	31N	116W	7400	13830	W	Cottonwood Lake	25	31N	116W	7400
13788	W	Butterfly Creek	11	24N	114W	5000	13831	W	Cottonwood Lake	25	31N	116W	7400	13831	W	Cottonwood Lake	25	31N	116W	7400	13831	W	Cottonwood Lake	25	31N	116W	7400	13831	W	Cottonwood Lake	25	31N	116W	7400	13831	W	Cottonwood Lake	25	31N	116W	7400	13831	W	Cottonwood Lake	25	31N	116W	7400
13789	W	Butterfly Creek	11	24N	114W	5000	13832	W	Cottonwood Lake	25	31N	116W	7400	13832	W	Cottonwood Lake	25	31N	116W	7400	13832	W	Cottonwood Lake	25	31N	116W	7400	13832	W	Cottonwood Lake	25	31N	116W	7400	13832	W	Cottonwood Lake	25	31N	116W	7400	13832	W	Cottonwood Lake	25	31N	116W	7400
13790	W	Butterfly Creek	11	24N	114W	5000	13833	W	Cottonwood Lake	25	31N	116W	7400	13833	W	Cottonwood Lake	25	31N	116W	7400	13833	W	Cottonwood Lake	25	31N	116W	7400	13833	W	Cottonwood Lake	25	31N	116W	7400	13833	W	Cottonwood Lake	25	31N	116W	7400	13833	W	Cottonwood Lake	25	31N	116W	7400
13791	W	Butterfly Creek	11	24N	114W	5000	13834	W	Cottonwood Lake	25	31N	116W	7400	13834	W	Cottonwood Lake	25	31N	116W	7400	13834	W	Cottonwood Lake	25	31N	116W	7400	13834	W	Cottonwood Lake	25	31N	116W	7400	13834	W	Cottonwood Lake	25	31N	116W	7400	13834	W	Cottonwood Lake	25	31N	116W	7400
13792	W	Butterfly Creek	11	24N	114W	5000	13835	W	Cottonwood Lake	25	31N	116W	7400	13835	W	Cottonwood Lake	25	31N	116W	7400	13835	W	Cottonwood Lake	25	31N	116W	7400	13835	W	Cottonwood Lake	25	31N	116W	7400	13835	W	Cottonwood Lake	25	31N	116W	7400	13835	W	Cottonwood Lake	25	31N	116W	7400
13793	W	Butterfly Creek	11	24N	114W	5000	13836	W	Cottonwood Lake	25	31N	116W	7400	13836	W	Cottonwood Lake	25	31N	116W	7400	13836	W	Cottonwood Lake	25	31N	116W	7400	13836	W	Cottonwood Lake	25	31N	116W	7400	13836	W	Cottonwood Lake	25	31N	116W	7400	13836	W	Cottonwood Lake	25	31N	116W	7400
13794	W	Butterfly Creek	11	24N	114W	5000	13837	W	Cottonwood Lake	25	31N	116W	7400	13837	W	Cottonwood Lake	25	31N	116W	7400	13837	W	Cottonwood Lake	25	31N	116W	7400	13837	W	Cottonwood Lake	25	31N	116W	7400	13837	W	Cottonwood Lake	25	31N	116W	7400	13837	W	Cottonwood Lake	25	31N	116W	7400
13795	W	Butterfly Creek	11	24N	114W	5000	13838	W	Cottonwood Lake	25	31N	116W	7400	13838	W	Cottonwood Lake	25	31N	116W	7400	13838	W	Cottonwood Lake	25	31N	116W	7400	13838	W	Cottonwood Lake	25	31N	116W	7400	13838	W	Cottonwood Lake	25	31N	116W	7400	13838	W	Cottonwood Lake	25	31N	116W	7400
13796	W	Butterfly Creek	11	24N	114W	5000	13839	W	Cottonwood Lake	25	31N	116W	7400	13839	W	Cottonwood Lake	25	31N	116W	7400	13839	W	Cottonwood Lake	25	31N	116W	7400	13839	W	Cottonwood Lake	25	31N	116W	7400	13839	W	Cottonwood Lake	25	31N	116W	7400	13839	W	Cottonwood Lake	25	31N	116W	7400
13797	W	Butterfly Creek	11	24N	114W	5000	13840	W	Cottonwood Lake	25	31N	116W	7400	13840	W	Cottonwood Lake	25	31N	116W	7400	13840	W	Cottonwood Lake	25	31N	116W	7400	13840	W	Cottonwood Lake	25	31N	116W	7400	13840	W	Cottonwood Lake	25	31N	116W	7400	13840	W	Cottonwood Lake	25	31N	116W	7400
13798	W	Butterfly Creek	11	24N	114W	5000	13841	W	Cottonwood Lake	25	31N	116W	7400	13841	W	Cottonwood Lake	25	31N	116W	7400	13841	W	Cottonwood Lake	25	31N	116W	7400	13841	W	Cottonwood Lake	25	31N	116W	7400	13841	W	Cottonwood Lake	25	31N	116W	7400	13841	W	Cottonwood Lake	25	31N	116W	7400
13799	W	Butterfly Creek	11	24N	114W	5000	13842	W	Cottonwood Lake	25	31N	116W	7400	13842	W	Cottonwood Lake	25	31N	116W	7400	13842	W	Cottonwood Lake	25	31N	116W	7400	13842	W	Cottonwood Lake	25	31N	116W	7400	13													

Agencies Assisting with Snow Surveys, etc.

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests, and
Water Resources, British Columbia
Department of Resources and Development,
Water Resources Division

States:

Idaho State Reclamation Engineer
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service
Agricultural Research Service

U. S. Department of Commerce
Weather Bureau

U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

The Montana Power Company
Washington Water Power Company
Idaho Power Company
Utah Power and Light Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Boise Project Board of Control
Little Wood River Irrigation District
Jordan Valley Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Twin Lakes Irrigation Company
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control

PRIVATE CORPORATIONS

Amalgamated Sugar Company

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*

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